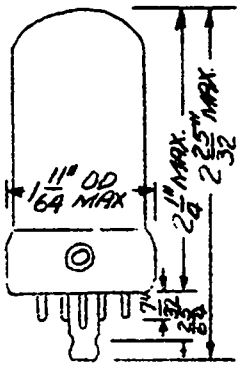
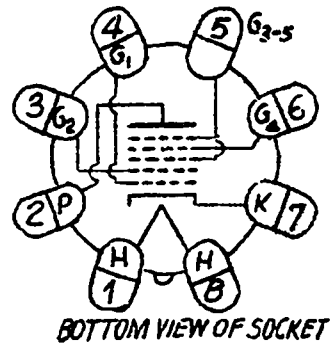
7B8 7B8

TENTATIVE DATA
RAYTHEON TYPE 7B8



HEPTODE
PENTAGRID CONVERTER
Heater Type
Glass Bulb Loktal Base



BOTTOM VIEW OF SOCKET

The 7B8 is a pentagrid type converter tube designed for use as a combined oscillator and mixer in superheterodyne receivers.

NOMINAL RATINGS		
Heater Voltage (a-c or d-c)	7.0	volts
Heater Current	0.32	amp

MAXIMUM AND MINIMUM RATINGS		
Maximum Plate Voltage	250	volts
Maximum Screen (G_3 & G_5) Voltage	100	volts
Maximum Anode Grid (G_2) Voltage	200	volts
Maximum Anode Grid Supply Voltage	250	volts
Minimum Control Grid (G_4) Bias	-3	volts
Maximum Total Cathode Current	14	ma

DIRECT INTERELECTRODE CAPACITANCES		
G_4 to P (Mixer Grid to Plate)	0.30 max.	μμf
G_4 to G_2 (Mixer Grid to Oscillator Plate)	0.20	μμf
G_4 to G_1 (Mixer Grid to Oscillator Grid)	0.15	μμf
G_1 to G_2 (Oscillator Grid to Plate)	0.8	μμf
G_4 to All Other Electrodes (Mixer Input Electrode)	9.5	μμf
G_2 to All Other Electrodes Except G_1 (Osc. Output Electrode)	3.0	μμf
G_1 to All Other Electrodes Except G2 (Osc. Input Electrode)	4.4	μμf
P to All Other Electrodes (Mixer Output Electrode)	9.0	μμf

TYPICAL FREQUENCY CONVERTER CONDITIONS			
Heater Voltage	6.3	6.3	volts
Heater Current	0.3	0.3	amp
Plate Voltage	100	250	volts
Screen Voltage	50	100	volts
Anode Grid Voltage	100	-	volts
Anode Grid Supply Voltage	-	250 *	volts
Control Grid Bias	-1.5 min.	-3	volts
Oscillator Grid Resistor	50000	50000	ohms
Plate Resistance	0.6	0.36	megohm
Conversion Transconductance	360	550	μmhos
Plate Current	1.1	3.5	ma
Screen Current	1.3	2.7	ma
Anode Grid Current	2.0	4.0	ma
Oscillator Grid Current	0.25	0.4	ma
Control Grid Bias (approximate)			
For Conversion Transconductance = 6 μmhos	-	-35	volts
For Conversion Transconductance = 3 μmhos	-20		volts

* Applied through a 20000 ohm series resistor.

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